

THE MINERAL INDUSTRY OF THE UNITED ARAB EMIRATES

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In 2003, the diversified economy of the United Arab Emirates¹ (UAE) was built on a foundation of oil and natural gas production and international and regional trade. The UAE had an estimated gross domestic product (GDP) based on purchasing power parity valuation of \$81.7 billion² and a GDP per capita based on purchasing power parity valuation of \$20,216 (International Monetary Fund, 2004³). The production of crude oil and natural gas accounted for 22.6% of the GDP in 2003, up from 21.2% in 2002. The contribution of the manufacturing sector (primarily liquefied natural gas and refined petroleum products) increased slightly to about 16% of GDP, and that of the quarrying sector, to about 0.3% of the GDP. According to the Central Bank of the United Arab Emirates (2004, p. 14-22), total population was more than 4.4 million in 2003; of the country's 2.2 million labor force, about 297,834 worked in the manufacturing sector; 28,073 in the crude oil and natural gas sector; and 4,838 in quarrying.

Trade

The value of crude oil exports from the UAE was estimated to be \$22.1 billion in 2003, up from \$17 billion in 2002. About 98% of these exports went to countries in the Asia and the Pacific region. Much of the increase in the value of crude oil exports could be attributed to an increase in the average price received per barrel of crude, which was \$28.1 per barrel in 2003 compared with \$24.7 per barrel in 2002. In 2003, natural gas exports were valued at \$3.9 billion and refined petroleum products exports were valued at \$3.5 billion. Total exports and re-exports were valued at \$65.8 billion, up significantly from \$49.6 billion in 2002. Crude oil exports accounted for 33.6% of the value of total exports and re-exports in 2003 compared with 34.2% in 2002. Of this total, re-exports accounted for 33.9% compared with 29.4% in 2002 (the UAE was a significant transshipment point for the region); natural gas exports, 5.9% compared with 6.8% in 2002; and refined petroleum products exports, about 5.4% compared with 6.7% in 2002. Dubai, which was a major regional trading center for gold, imported about 373.8 metric tons (t) of gold and exported 121.7 t in 2003 (Central Bank of the United Arab Emirates, 2004, p. 34-36; Dubai Metals & Commodities Centre, 2004[§]; Ministry of Economy and Planning, 2004[§]).

Commodity Review

Abu Dhabi accounted for about 90% of the country's hydrocarbons production. Dubai was the second leading oil-producing Emirate, but its production has been in decline for a number of years, as has oil production in Ras Al-Khaimah. Sharjah produced primarily condensate and natural gas. Other minerals and mineral commodities produced in the UAE included aluminum and steel manufactured in Dubai; ammonia manufactured in Abu Dhabi; cement manufactured in Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al-Khaimah, and Sharjah; chromite mined in Fujairah; and stone quarried in Ras Al-Khaimah. Also, ceramic tiles, glass, and gypsum were produced in various Emirates. All mineral resources were controlled by the individual Emirates and administered by the Federal Government.

In 2003, the expansion of the country's aluminum production capacity and demand for copper continued. A new potline for Dubai Aluminium Co. Ltd., which would raise the facility's capacity to about 710,000 metric tons per year (t/yr), was underway. Dubai Cable Co. Ltd. was building a new cable plant at Mussafah, Abu Dhabi, that would consume about 25,000 t/yr of copper. Other projects that were expected to increase mineral commodity consumption in the UAE included Altajir Glass Factory's expansion of its production capacity to about 2.2 million glass bottles per day from 1.5 million and Dubai Investment Co.'s float glass factory, which was at the feasibility-study stage (Metal Bulletin, 2003b; Middle East North Africa Financial Network, Inc., 2003b[§], c[§]).

Metals

Steel.—Al-Ghaith Holdings initiated plans to build a 500,000-t/yr MIDREX direct-reduction iron plant and a 300,000-t/yr minimill with a 40-metric-ton-capacity electric arc furnace in Abu Dhabi. The \$140 million facility, which would be known as the Hamil Steel mill, would process imported ore and was expected to be operational in 2006 (Metal Bulletin, 2003a).

Mineral Fuels

Natural Gas.—The Abu Dhabi National Oil Co. proposed to add a 34-thousand-cubic-meter-per-day gas plant at the onshore Bab Field in the Habshan area. The project, which was designated the Onshore Gas Development phase III (OGD-3), was expected to be

¹ Comprises the following Emirates: Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al-Khaimah, Sharjah, and Umm al-Qaywayn.

² Where necessary, values have been converted from United Arab Emirate Dirham (AED) to U.S. dollars (US\$) at the rate of AED3.67=US\$1.00.

³ References that include a section mark (§) are found in the Internet References Cited section.

operational in 2006. The proposed Asab Gas Development project phase II (Asab-2) would add 21.3-million-cubic-feet-per-day-capacity gas treatment and 4,500-metric-ton-per-day-capacity natural gas liquids plants at Asab. Asab-2 was scheduled to be completed in 2007. To accommodate the expected increased natural gas and water production associated with the Bu Hasa oilfield expansion, Abu Dhabi Co. for Onshore Oil Operations (ADCO) awarded a contract for new processing facilities that were designed to re-inject 7 million cubic meters per day of natural gas and 120,000 barrels per day (bbl/d) of water. In 2003, Dolphin Energy Ltd. signed additional long-term agreements to supply natural gas to local utility companies. The Abu Dhabi National Oil Co. for Distribution proposed to connect an additional 120,000 industrial and residential customers to its network by building a new natural gas distribution system (Middle East Economic Digest, 2003, 2004; Oil & Gas Journal, 2003; Middle East North Africa Financial Network, Inc., 2003a§; Oil and Gas Investor.com, 2004§).

Petroleum.—Abu Dhabi Oil Refining Co. awarded a contract to design a new petroleum export facility at Ruwais. ADCO awarded contracts to increase the production capacity at the Bab Field to 350,000 bbl/d from 250,000 bbl/d and to proceed with the Northeast Bab project (comprised of the Al-Dabbiya, Rumaitha, and Shanayel Fields), which would increase production capacity to 110,000 bbl/d from 10,000 bbl/d (AME Info FZ LLC, 2003§; Reuters, 2003§).

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Major Source of Information

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TABLE 1
THE UNITED ARAB EMIRATES: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	1999	2000	2001	2002 ^e	2003 ^e
Aluminum, primary	440,000	470,000	500,000	536,000	560,000
Cement, hydraulic ^e	7,069,000 ³	6,100,000	6,100,000	6,500,000	6,600,000
Chromium, gross weight ^e	60,000	30,000	10,000	10,000	10,000
Gas, natural: ^e					
Gross million cubic meters	50,200 ³	52,000	54,000	55,000	60,000
Dry do.	38,500	39,800	41,300	42,000	45,000
Gypsum ^e	90,000	90,000	90,000	90,000	100,000
Lime ^e	50,000	50,000	50,000	50,000	50,000
Natural gas plant liquids ^e thousand 42-gallon barrels	80,000	80,000	80,000	80,000	80,000
Nitrogen:					
N content of ammonia	380,200	348,400	357,900	364,000	421,000
N content of urea	271,500	243,400	250,000 ^e	260,000	400,000
Petroleum: ^e					
Crude thousand 42-gallon barrels	756,000	815,000	790,000	750,000	920,000
Refinery products: ⁴					
Gasoline do.	12,800	10,800 ^r	11,000 ^r	11,400 ^r	11,000
Kerosene do.	21,000	30,900 ^r	30,000 ^r	39,000 ^r	40,000
Distillate fuels do.	24,400	29,100 ^r	30,000 ^r	34,900 ^r	33,800
Residual fuels do.	12,300	13,400 ^r	12,000 ^r	11,300 ^r	7,800
Other do.	10,700	30,800 ^r	30,000 ^r	58,300 ^r	38,400
Total do.	81,200	115,000 ^r	113,000 ^r	155,000 ^r	131,000
Steel ^e	70,000	70,000	70,000	70,000	50,000
Sulfur, byproduct of petroleum refining and natural gas processing	1,089,000	1,122,000	1,490,000 ^e	1,900,000	1,900,000

^eEstimated; estimated data and totals are rounded to no more than three significant digits and may not add to totals shown. ^rRevised.

¹Table includes data available through July 2004.

²In addition to the commodities listed, crude industrial minerals, such as common clays, diabase, gravel, limestone, marble, sand, and shale presumably are produced, but output is not reported, and information is inadequate to make estimates of output.

³Reported figure.

⁴Daily production data converted assuming a 365-day operating year, and rounded.